

NEW TAXA AND COMBINATIONS IN GRAMINEAE TRIBE TRITICEAE FROM TURKEY

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ABSTRACT. Two new species and four new subspecies of *Elymus* are described. Four combinations at specific rank, seven at subspecific and one at varietal rank are made in *Elymus*, together with one new subspecific combination in *Agropyron*, one new subspecific combination in *Eremopyrum*, one new combination at specific rank in *Leymus* and two new subspecific combinations in *Taeniatherum*. See also Addendum.

Agropyron Gaertner

Agropyron cristatum (L.) Gaertner in Novi Comment. Acad. Sci. Petrop. 14:540 (1770) subsp. *incanum* (Náb.) Melderis, **stat. nov.**

Syn.: *A. cristatum* (L.) Gaertner var. *incanum* Náb. in Publ. Fac. Sci. Univ. Masaryk Brno 111:26 (1929).

Elymus L.

Elymus clivorum Melderis, **sp. nov.**

Affinis *E. repenti* (L.) Gould subsp. *elongatiformi* (Drobov) Melderis a quo foliorum laminis angustioribus, spiculis minoribus, glumis brevioribus obscure 3-4-nervatis, apice abrupte apiculatis, lemmate brevior, apice mucronulato, mucrone 0.5-1.5 mm longo differt.

Gramen perenne, laxe caespitosum, rhizomate breviter repente, glauco-viride. Culmi 45-50 cm alti, geniculato-ascendentes, graciles, glabri laevesque. Foliorum laminae 2-3 mm latae, planae demum marginibus involutae, supra nervis crassiusculis approximatis pilis brevibus tectae, subtus glabrae laevesque, inferiores marginibus sparse spinuloso-ciliatae; vaginae marginibus ciliatae, inferiores sparse brevipilosa. Spicae 5-6 cm longae, 5-9-spiculatae, laxiusculae; rhachis secus angulos breviscaberulosa. Spiculae 10-11 mm longae, plerumque 3-florae. Glumae 5-6 mm longae, subaequales, angustae, oblongo-ellipticae, obscure 3-4-nervatae, glabrae laevesque, apice abrupte apiculatae. Lemma inferius 6-7 mm longum, oblongo-lanceolatum, superne obscure 5-nervatum, glabrum laeveque, apice subobtusum, mucronulatum, mucrone 0.5-1.5 mm longum. Palea lemmati subaequilonga, in parte dimidia superiore carinarum breviter ciliata. Rhachilla minutissime strigillosa. Fl. Jul.

Type: Turkey B8 Muş: 6 km from Çaylar to Varto, 1750 m, slopes in steppe, 11 vii 1966, P. Davis 46308 (holo. E).

Elymus elongatus (Host) Runemark in Hereditas 70:156 (1972) subsp. *salsus* Melderis, **subsp. nov.**

A subsp. *elongato* foliorum laminis vaginis inferioribusque dense brevissime puberulis incanis, rhachide angulis sparse scabriuscula, glumis scabris differt.

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Gramen perenne, caespitosum, sine rhizomatibus, pruinatum, basi incanum. *Culmi* 50–55 cm alti, rigidi, geniculato-ascendentes, basi incrassati, glabri laevesque. *Foliorum laminae* breves, 1–2.5 mm latae, firmae, planae, demum \pm convolutae, supra nervis crassiusculis approximatis, utrinque dense brevissime puberulae, marginibus non ciliatis. *Spicae* c. 15 cm longae, laxiusculae, erectae; rhachidis internodia angulis sparse scabriuscula, inferne spiculis longiora. *Spiculae* 12–15 mm longae, 5–7-florae, leviter compressae. *Glumae* 6–7 mm longae, indurato-coriaceae, 5–6-nervatae, nervis scabris, obtusae vel \pm truncatae. *Lemma* 7–9 mm longum, obscure 5-nervatum, glabrum laeveque, obtusum vel emarginatum. *Palea* lemmati subaequilonga, carinis sparse breviter ciliata. Type: Turkey B5 Kayseri: Cappadocia, Argaeus (Erciyas Dağ) am Salzsee vom Ewerek, 1200 m, *Siehe* 240 (holo. BM; iso. E, K, W).

***Elymus erosiglumis* Melderis, sp. nov.**

Affinis *E. elongato* (Host) Runemark a quo foliorum laminis supra breviter pilosis, vaginis plerumque breviter ciliatis, inferioribus saepe dense brevipubescentibus, glumis lemmatibusque dorso glabris laevibusque, marginibus minutissime pubescentibus differt.

Gramen perenne, dense caespitosum, radice lignosa, breviter repente. *Culmi* 70–80 cm alti, basi breviter decumbentes, demum erecti, glabri laevesque. *Foliorum laminae* 15–40 cm longae, 2–4.5 mm latae, planae vel marginibus involutae, supra nervis crassiusculis pilis brevibus tectae, subtus glabrae laevesque; vaginae plerumque breviter ciliatae, inferiores saepe dense brevipubescentes. *Spicae* 9.5–22 cm longae, graciles, laxae; rhachis pauciciliata vel glabra laevisque. *Spiculae* 12–15 mm, 5-florae. *Glumae* 7–10.5 mm longae, subaequilongae, coriaceae, conspicue 5-nervatae, dorso glabrae laevesque, marginibus minutissime pubescentes, apice erosae vel emarginatae, interdum truncatae, apiculatae. *Lemma inferius* 9–10 mm longum, obscure 5-nervatum, dorso glabrum laeveque, marginibus minutissime pubescentibus, apice emarginatum, saepe inter sinum breviapiculatum, interdum subobtusum. *Palea* lemmate plerumque distincte brevior, in parte dimidia superiore carinarum minute spinulosociliata. *Fl.* Jun.

Type: Turkey B6 Malatya: Gürün, 3500 ft, eroded hills of calc. shale, 19 vi 1954, *Davis* 21888 (holo. BM; iso. E, K).

***Elymus farctus* (Viv.) Runemark ex Melderis in Bot. J. Linn. Soc. 76:382 (1978) subsp. *farctus* var. *sartorii* (Boiss. & Heldr.) Melderis, comb. nov.**

Syn.: *Agropyron junceum* (L.) P. Beauv. var. *sartorii* Boiss. & Heldr. in Boiss., *Diagn. ser.* 2(4):142 (1859).

***Elymus hispidus* (Opiz) Melderis in Bot. J. Linn. Soc. 76:380 (1978) subsp. *podpyrae* (Náb.) Melderis, comb. et stat. nov.**

Syn.: *Agropyron podpěrae* Náb. in Publ. Fac. Sci. Univ. Masaryk Brno 111:24, f. 9 (1929).

***Elymus hispidus* (Opiz) Melderis subsp. *pulcherrimus* (Grossh.) Melderis, comb. nov.**

Syn.: *Agropyron pulcherrimum* Grossh. in Monit. Jard. Bot. Tiflis 13–14:42, t. 4 f. 1–5 (1919).

Elytrigia intermedia (Host) Nevski subsp. *pulcherrima* (Grossh.) Tzvelev in Novit. Syst. Pl. Vasc. (Leningrad) 10:31 (1973).

Elymus koshaninii (Náb.) Melderis, **comb. nov.**

Syn.: *Agropyron koshaninii* Náb. in Publ. Fac. Sci. Univ. Masaryk Brno 111:25, t. 2 f. 8/4-7 (1929).

Elymus lazicus (Boiss.) Melderis, **comb. nov.**

Syn.: *Agropyron lazicum* Boiss., Fl. Or. 5:661 (1884).

Elymus lazicus (Boiss.) Melderis subsp. *attenuatiglumis* (Nevski) Melderis, **comb. et stat. nov.**

Syn.: *Agropyron attenuatiglume* Nevski in Fl. URSS 2:636 (1934).

Elymus lazicus (Boiss.) Melderis subsp. *divaricatus* (Boiss. & Bal.) Melderis, **comb. et stat. nov.**

Syn.: *Agropyrum divaricatum* Boiss. & Bal. in Bull. Soc. Bot. Fr. 4:307 (1857) non *Elymus divaricatus* Drobov (1925).

Elymus lazicus (Boiss.) Melderis subsp. *lomatolepis* Melderis, **subsp. nov.**

Ab aliis subspeciebus huius speciei lemmate dorso glabro, marginibus brevipiloso differt.

Gramen perenne, caespitosum, sine rhizomatibus, glauco-viride, leviter pruinatum. *Culmi* 35-60 cm alti, geniculato-ascendentes, glabri laevesque. *Foliorum laminae* longae, 1.5-2.5 mm latae, \pm convolutae, supra breviter pilosae, subtus glabrae laevesque. *Spicae* 5-7 cm longae (aristis exclusis), erectae, densiusculae; rhachis angulis sparse spinuloso-ciliata. *Spiculae* 15-18 mm longae, 5-7-florae. *Glumae* 6-10 mm, subaequales, coriaceae, oblongo-lanceolatae, 5-7-nervatae, leviter carinatae, carina sparse scaberriusculae, acuminatae vel bifidae vel unidentatae, aristulatae (aristula plerumque 2-7 mm longa). *Lemma inferius* 10-12 mm longum, versus apicem conspicue 5-nervatum, dorso glabrum laeveque, marginibus brevipilosum, apice interdum uni- vel bidentatum, aristatum; arista 2-3.5 cm longa, \pm divaricata. *Palea* lemmati subaequilonga, in parte dimidia superiore carinarum breviter ciliata. *Fl.* Jun.-Jul.

Type: Turkey B7 Erzincan: Egin, Kota, in saxosis, 1 vii 1890, *P. Sintenis* 2829 (holo. HAL, Hb. Hausskn.; iso. BM, W).

Elymus longearistatus (Boiss.) Tzvelev in Novit. Syst. Pl. Vasc. (Leningrad) 9:62(1972) subsp. *sintenisii* Melderis, **subsp. nov.**

Affinis subsp. *flexuosissimo* (Nevski) Tzvelev a quo culmis, foliorum laminis vaginisque minutissime strigillosis, lemmate brevior, basi minutissime strigilloso, dorso glabro, versus apicem scaberulo, antheris longioribus differt.

Gramen perenne, caespitosum, sine rhizomatibus. *Culmi* 25-40 cm alti, geniculato-ascendentes, sparse minutissime strigillosi. *Foliorum laminae* c. 1.5 mm latae, convolutae, supra dense minutissime strigosae, subtus sparse minutissime strigillosae vel glabrae laevesque; vaginae sparse minutissime strigillosae. *Spicae* 4-4.5 cm longae (aristis exclusis), erectae, plerumque 2-3-spiculatae; rhachidis internodia angulis minute spinuloso-ciliata.

Spiculae 15–17 mm (aristis exclusis) longae, 4–5-florae, purpureo-tinctae; rhachilla fragillima, articulis 2–3 mm longis, minute strigillosis. *Glumae* 5–10 mm longae, inaequales, conspicue 3–5-nervatae, acuminatae vel aristulatae (arista 1–3 mm longa) vel saepe bidentatae. *Lemma* 3–10 mm longum, basi minutissime strigillosum, dorso glabrum laeveque, versus apicem scaberrimum, callo 0.5–0.8 mm longo, elongato, lateralibus breviter strigilloso; arista 2.5–4 cm longa, \pm recurvata, basi dilatata, subcanaliculata. *Palea* lemmati subaequilonga, in parte dimidia superiore carinarum breviter spinuloso-ciliata. *Antherae* 4.5–4.8 mm longae. *Fl.* Jul. Type: Turkey A7 Gümüşane: Kirkpauli, in declivibus, 16 vii 1894, P. Sinton 6261 (holo. LD; iso, HAL, Hb. Hausskn.).

Elymus nodosus (Nevski) Melderis in Bot. J. Linn. Soc. 76:376 (1978) subsp. ***caespitosus*** (C. Koch) Melderis, **comb. et stat. nov.**

Syn.: *Agropyron caespitosus* C. Koch in Linnaea 21:424 (1848) non *Elymus caespitosus* Sukaczew (1913).

Neotype designated here: Turkey A8 Çoruh: Lomaşen, nr. Artvin, 30 vi 1907, G. Woronow (BM).—The original type specimen collected near Ardahan by C. Koch is destroyed.

Elymus nodosus (Nevski) Melderis in Bot. J. Linn. Soc. 76:376 (1978) subsp. ***platyphyllus*** Melderis, **subsp. nov.**

Affinis *E. nodoso* subsp. *caespitoso* (C. Koch) Melderis (vide supra) a quo foliorum laminis planis, rhachidi breviter flexuosa (nec erecta), spiculis 4–5-floris (nec saepe 3-floris), glumis conspicue 4–5-nervatis (nec obscure 5–7-nervatis), rhachilla subglabra laeveque differt.

Gramen perenne, caespitosum, sine rhizomatibus, glaucoviride. *Culmi* 55–65 cm alti, geniculato-ascendentes, glabri laevesque. *Foliorum laminae* 10–15 cm longae, 3–5 mm latae, planae vel demum marginibus involutae, supra nervis marginibusque scabrae, subtus glabrae laevesque; vaginae glabrae laevesque, inferiores breviter ciliatae. *Spicae* 10–15 cm longae, laxae, \pm erectae; rhachis leviter flexuosa, angulis sparse brevissime spinuloso-ciliata. *Spiculae* 12–15 mm longae, 4–5-florae. *Glumae* 5.5–8 mm longae, inaequales, oblongae, coriaceae, conspicue 4–5-nervatae, hyalino-marginatae (2–3 mm), glabrae laevesque, apice obtusa. *Lemma inferius* 9–10 mm longum, oblongo-ellipticum, dorso glabrum laeveque, superne 5-nervatum, muticum apice subobtusum. *Palea* lemmati aequilonga, in parte dimidia vel tertia superiore carinarum breviter ciliata. *Rhachilla* subglabra laevisque. *Antherae* 5–5.5 mm longae, purpureae. *Fl.* Jul.

Type: Turkey A9 Kars: mountains E of Kağızman, c. 20 km from Akçay to Cumaçay, dry pastures, 2200 m, 17 vii 1966, P. Davis 46692 (holo. E, K).

Elymus nodosus (Nevski) Melderis in Bot. J. Linn. Soc. 76:376 (1978) subsp. ***sinuatus*** (Nevski) Melderis, **comb. nov.**

Syn.: *Agropyron sinuatum* Nevski in Fl. URSS 2:639 (1934).

Elytrigia caespitosum (C. Koch) Nevski subsp. *sinuata* (Nevski) Tzvelev in Novit. Syst. Pl. Vasc. (Leningrad) 10:30 (1973).

Elymus sosnowskyi (Hackel) Melderis, **comb. nov.**

Syn.: *Agropyron sosnowskyi* Hackel in Monit. Jard. Bot. Tiflis 29:26 (1913).

Elymus tauri (Boiss. & Bal.) Melderis, **comb. nov.**

Syn.: *Agropyron tauri* Boiss. & Bal. in Bull. Soc. Bot. Fr. 4:307 (1857).

Elymus tauri (Boiss. & Bal.) Melderis subsp. **pertenue** (C. A. Meyer) Melderis, **comb. nov.**

Syn.: *Triticum intermedium* Host var. *pertenue* C. A. Meyer, Verz. Pfl. Cauc. 25 (1831).

Elytrigia tauri (Boiss. & Bal.) Tzvelev subsp. *pertenue* (C. A. Meyer) Tzvelev in Novit. Syst. Pl. Vasc. (Leningrad) 10:30 (1973).

Eremopyrum (Ledeb.) Jaub. & Spach

Eremopyrum bonaepartis (Sprengel) Nevski in Acta Univ. Asiae Med. ser. 8b (Bot.), 17:52, in clave (1934) subsp. **hirsutum** (Bertol.) Melderis, **comb. et stat. nov.**

Syn.: *Hordeum hirsutum* Bertol., Misc. Bot. 1:11 (1842).

Leymus Hochst.

Leymus cappadocicus (Boiss. & Bal.) Melderis, **comb. nov.**

Syn.: *Elymus cappadocicus* Boiss. & Bal. in Bull. Soc. Bot. Fr. 4:308 (1857).

Taeniatherum Nevski

Taeniatherum caput-medusae (L.) Nevski in Acta Univ. Asiae Med. ser. 8b (Bot.), 17:38 (1934) subsp. **asper** (Simonkai) Melderis, **stat. nov.**

Syn.: *Cuviera caput-medusae* (L.) Koeler var. *aspera* Simonkai in Term. Füz. 29:230 (1897).

Taeniatherum asperum (Simonkai) Nevski in Acta Univ. Asiae Med. ser. 8b (Bot.), 17:39 (Apr. 1934) et in Fl. URSS 2:719, t. 50 f. 4 (1934).

Taeniatherum caput-medusae (L.) Nevski, loc. cit. (1934) subsp. **crinitum** (Schreber) Melderis, **stat. nov.**

Syn.: *Elymus crinitus* Schreber, Besch. Gräs. 2:15, t. 24 f. 1 (1772).

Taeniatherum crinitum (Schreber) Nevski, op. cit. 38 (Apr. 1934).

T. caput-medusae (L.) Nevski var. *crinitum* (Schreber) C. J. Humphries in Bot. J. Linn. Soc. 76:343 (1978).

ADDENDUM

(inserted at proof)

Elymus elongatus (Host) Runemark in Hereditas 70:156 (1972) subsp. **turcicus** (McGuire) Melderis, **comb. et stat. nov.**

Syn.: *Elytrigia turcica* McGuire in Folia Geobot. Phytotax. (Praha) 18(1):108, t. 7 (1983).

Elymus farctus (Viv.) Runemark ex Melderis in Bot. J. Linn. Soc. 76:382 (1978) subsp. *bessarabicus* (Sävil. & Rayss) Melderis, op. cit. 383 (1978) var. *striatulus* (Runemark) Melderis, **comb. et stat. nov.**
Syn.: *Elymus striatulus* Runemark in Bot. Not. 125(4):419, 421 f. 1 (1972).

Elymus gentryi (Melderis) Melderis, **comb. nov.**

Syn.: *Agropyron gentryi* Melderis in Rech. fil., Fl. Iranica 70:165 (1970).

Elymus nodosus (Nevski) Melderis in Bot. J. Linn. Soc. 76:376 (1978) subsp. *gypsicolus* Melderis, **subsp. nov.**

Ab *E. nodoso* subsp. *caespitoso* (C. Koch) Melderis (*vide supra*) foliorum laminis planis, latioribus (nec 1–3 mm latis), superne dense scaberulis, marginibus incrassatis, scabris, spiculis majoribus (nec 9–12 mm longis), 5-floris (nec plerumque 3-floris), lemmate longiore (nec 7–8 mm longo) differt.

Gramen perenne, caespitosum, viride. Culmi 55–65 cm alti, graciles, glabri laevesque. Foliorum laminae 8–12 cm longae, 2.5–4.5 mm latae, planae, multinerves, supra dense scaberulae, subtus glabrae laevesque, marginibus incrassatae, scabrae; vaginae inferiores marginibus sparse breviciliatae. Spicae 10–15 cm longae, lineares, erectae, laxiusculae; rhachis angulis minute spinuloso-ciliata. Spiculae 12–15 mm longae, plerumque 5-florae, purpureo-tinctae, ad rhachin adpressae. Glumae 7–10 mm longae, subaequales, anguste oblongo-ellipticae, basi obscure 5-nervatae, glabrae laevesque, apice obtusae, marginibus anguste hyalinae. Lemma inferius 10–14 mm longum, oblongo-lanceolatum, glabrum laeveque, apice muticum, interdum leviter emarginatum. Palea lemmati subaequilonga, in parte tertia superiore carinarum minutissime ciliata. Rhachilla minutissime strigillosa. Fl. Jul.

Type: Turkey B6 Sivas: d. Kangal, between Çetinkaya and Kingöz Köy, gypsum slopes, 1580–1700 m, 7 viii 1982, P. Davis & Ekim 68745 (holo. E).